

A CATALOGUE OF THE BIRDS IN THE COLLECTION OF THE BOMBAY NATURAL HISTORY SOCIETY—22

Corvidae, Bombycillidae

HUMAYUN ABDULALI

[Continued from Vol. 75(2): 384]

This part covers 646 specimens of 71 species and subspecies up to No. 1063 in INDIAN HANDBOOK. I am grateful to Miss Renée Borges and to Mr Shahid Ali for routine assistance for some time.

EL *Platysmurus leucopterus* (Temminck)
(Sumatra) Whitewinged Jay 1:58
1 ♂? *Tavoy, S. Tenasserim.* Wing 188, tail 180.

EL *Garrulus leucotis leucotis* Hume (Kaukaryit, Tenasserim) Burmese Jay 1:61
Measurements on p. 94.

3:2 ♂♂ 1 ♀
1 *Hsipaw*, 1 *S.E. of Hsipaw*, 1 *Maymyo.*
Measurements on p. 94.

EL *Garrulus glandarius glandarius* (Linnaeus) (Sweden) Jay

2:1 ♀ 1 ♂? 1 *Godolla*, 1 *Matrajured, Hungary.*
The female has paler blue on the wings and a white chin *contra* almost concolorous with the underparts in the other.

Measurements on p. 94.

EL *Garrulus glandarius haringtoni* Rippon (Mt. Victoria, South Chin Hills) Rippon's Jay. 1:65

2 ♂♂: 1 *Camel's Hump, Tiddim*, 1 *Mt. Victoria, Pakokku, Chin Hills.*

Both can be separated from Indian birds by the pale buff, almost white, forehead and their larger wings. Smythies, 1953, BIRDS OF

* One of them bears no locality but was collected by J. C. Anderson.

BURMA, p. 9, synonymises *haringtoni* with *G. oatesi* but this is doubtless a slip, for the latter is a subspecies of *G. leucotis*.

Measurements on p. 94.

1020 *Garrulus glandarius bispecularis* Vigors (Himalayan Mts.—Murree) West Himalayan Jay 1:63

15:8 ♂♂ 5 ♀♀ 2 ♂?
1 *Dalhousie, Punjab*; 2* *Simla*; 1 *Grikund Kedarnath*, 1 *Bodiari*, 2 *Moureakher, Gharwal*, 5 *Dakuri, Kumaon*, 2 *Mussoorie*, 1 *Naini Tal, U.P.*

See notes under 1021.

Measurements on p. 94.

1021 *Garrulus glandarius interstinctus* Hartert (Darjeeling) East Himalayan Jay 1:64

11:5 ♂♂ 5 ♀♀ 1 ♂?
1 *Sipuri*, 1 *Godaveri*, 1 *Bouzini*, all near *Khatmandu, Nepal*; 1 *Shampong, Central Bhutan*, 3 *Gomchu*, 1 *Narphong, East Bhutan*; 2 *Lachung, North Sikkim*, 1 *Etalin 8000', Mishmi Hills.*

As has been noted by earlier writers, the two races are not easily separated. In series, the eastern birds are darker but the three from Nepal and one from Mishmi Hills are very reddish above. A ♂ collected at Shampong, 6500 ft. Central Bhutan, has the darkest upperparts and the forehead slightly paler. The birds from Bhutan and Sikkim are not yet registered.

Three males collected in Garhwal (2 on the same day) with pale underparts appear to be birds of the year. Their measurements are not included but are within the range of the adults.

Vaurie (1959, p. 143) when comparing this with *sinensis* states that the tips of the bristly feathers at the nostril are not black as in the latter. The specimens listed above show a varying amount of black at the tips of feathers at the nostril, and which appears independent of locality.

Measurements on p. 94.

1022 *Garrulus lanceolatus* Vigors (Himalayas—Simla-Almora District) Blackthroated Jay 1:60

21 : 8 ♂♂ (1 juv.) 8 ♀♀ 5 ♂

2 Chitral, 1 Gora Gali; 1 Murree, 1 Dalhousie, 1 Dharmasala, 1 Dhimi State, 3 Simla (1 collected by J. C. Anderson?); 2 Moghul Maidan, Kishtwar, Kashmir; 1 Lambathach, 1 Ghat, 1 Boliar, Garhwal, 1 Bininag, 1 Peora, Almora, 2 Morwala, 1 Dakuri, Kumaon, U.P.; 1 no locality.

Juvenile ♂ 291 has the feathers of the chin dishevelled, with short thick streaks, and a brownish head.

The black barring on the central tail feathers varies in distinctness but cannot be associated with sex or locality.

The largest unsexed No. 296 from Dharmasala, Punjab, (Wing 160, tail 165) has the shortest tarsus (28.7). In only one other (♂ 290 from Peora, Almora) is the wing (157) shorter than the tail (159).

Measurements on p. 95.

EL *Cyanocitta cristata* subsp.

1 ♂ *Little Lake, Barrie, Ontario, Canada.*

Wing 135; bill 26.6; tarsus 33; tail 132.

EL *Cyanopica cyanus interposita* Hartert (Tai pai Shan, Tsinling Range, Shensi, China) Azurewinged Magpie

3 ♀♀ *Peking, China.*

These are named trinomially on the basis of distribution in Vaurie (1959) and Peter's CHECK-LIST (1962, 15:245) and the measurements in parenthesis are from La Touche A HANDBOOK OF THE BIRDS OF EASTERN CHINA

2, p. 15. Wing 132, 136, 137 (135-141); bill 26, 26, 28 (24-28.5); tarsus 29, 30.5 (32-36.5), tail 172, 200, 206 (199-230).

1023 *Cissa chinensis chinensis* (Boddaert) (Mergui) Green Magpie 1:45

18 : 8 ♂♂ 5 ♀♀ 5 ♂?

2 Ranibag, 1 Kumaon, U.P.; 1 Singhik, N. Sikkim, 1 Singtam, Teesta Valley, 3 Longview T.E., 1 Darjeeling; 1 Laising, 1 Hungrum, 1 Roopchena, Cachar; 1 Jamirach, Dibrugarh, 2 Margherita, 1 Rotung, Abor Hills; 1 *Mishmi Hills*; 1 *Upper Burma*.

♂ No. 214 from Longview Tea Estate obtained on 25 January 1911 has one whisker on the left 140 mm. long.

15 specimens dated 1902-1952 are varying shades of blue both above and below. Three Nos. 203, 207 and 211 (1 ♂ 1 ♂ juv. 1 o?) from Mishmi Hills, Hungrum and Roopchena, going back to 1904 show a wash of green, particularly on the underparts. All wings are yellowish olive. Stevens (*JBNHS* 29 p. 514) refers to blue examples seen in the wild in March, April and May.

Whistler's mss. notes include a letter from CBT (Ticehurst) asking if the black subterminal bars on the inner secondaries and tertials are less distinct in juveniles, or if it is a racial (Himalayan) character. Only three specimens lack this barring and they are from Laising, N. Cachar ♀, Margherita ♂ and Upper Burma o?. The juvenile ♀ No. 211 is well marked.

Measurements on p. 95.

1024 *Cissa ornata* (Wagler) (Ceylon) Ceylon Blue Magpie

1 ♂ *Rookood, Ceylon.*

Measurements on p. 95.

1025 *Cissa flavirostris cucullata* (Gould) (Kuloo Valley) Western Yellowbilled Blue Magpie 1:44

10 : 3 ♂♂ (1 juv.) 3 ♀♀ (2 juv.) 4 o? (1 juv.)
 1 Doniwani Village, Lokab Valley, 2 Goond, Sind Valley, Kashmir; 1 Zokinath, 1 Chamoli, Garhwal, 4 Dakuri, Kumaon; 1 Kakam, Nepal.

In view of the small number of sexed adults, the measurements do not appear worth detailing.

Sp. No. 201 collected in Goond, Sind Valley, Kashmir, on 8 August 1873 by F. Stoliczka is perhaps one of the oldest specimens in the Bombay collection. One unregistered ♂ from 8000 ft, Chinakotti, West Bhutan, has its bill heavier than in the others and dark above.

See under 1027 for notes on juvenile plumage.

1026 *Cissa flavirostris flavirostris* (Blyth)
 (Darjeeling) Eastern Yellowbilled Blue Magpie 1:43

5 : 4 ♂♂ (1 juv.) 1 ♀ juv.

3 (1 juv.) Tongloo, 10000', 1 Phalut 11500', Darjeeling; 1 Shama Chembo, Rong Valley?

All differ from *C.f. cucullata* in having the lower breast washed with grey ('lilac white') which was presumably once yellow, and the upperparts are slightly darker than in 1025.

Sp. No. 190 from Chembo, Rong Valley, was collected by Stuart Baker on 13 July 1913. The words "Chin Hills" have been added with a query by Sálím Ali many years ago, but this does not appear to be correct, for Stuart Baker (1922, FAUNA, 1, p. 44) states that he had seen only one from Burma and which differed from the normal type (nominate *flavirostris*) in many ways. The latter specimen was collected by Wickham at about 7000 ft. north of Falam (JBNHS 33, p. 803) and was no doubt *shaferi* Sick (q.v.).

Four specimens (2 ♂♂ 2 ♀♀) collected in Bhutan by Sálím Ali (1966-68) not yet registered show a much darker grey below. Curiously, in these four specimens, though the males have larger wings (190, 197 cf. 186, 187)

the tails are longer in the females (410, 430 cf. 335, 350).

EL *Cissa flavirostris shaferi* Sick (Mt. Victoria, Chin Hills)

1 ♂ Kennedy Peak, Chin Hills, Burma.

Wing 172, bill 34, tail 345 (Sp. No. 189).

Shaferi was described on 5 ♂♂ and 9 ♀♀ and the single specimen confirms the small size, and probably represents a good subspecies with a very restricted range.

1027 *Cissa erythrorhyncha occipitalis* (Blyth) (Nepal and to the N.W., as at Mussoorie etc.) Himalayan Redbilled Blue Magpie 1:41

22 : 4 ♂♂ 8 ♀♀ (3 juv.) 10 o? (1 juv.)

1 Patiala State, 1 Dharmi State, 1 Kasumti 6000', Keonthal, 1 Kufri 8000', Punjab Hill States; 2 Simla; 1 Dehra Dun, 1 Naini Tal, 1 Lohghat, 1 Gangolihath, Almora; 1 Manauli, 3. Kumaon; 1 Godaveri, 1 Cholna Khel, 4 Loharipowa, Nepal; 2 no data.

Sorting out both the adults and the juveniles of *flavirostris* and *erythrorhyncha* has taken an unexpectedly long time. The red and yellow bills so distinct in the two species in life, both become yellow and I have been unable to trace any description of juvenile *flavirostris*. The collection contains 8 juveniles with the entire top of the head (except for a fringe on the forehead) white, which also extends down the nape. Some were listed as *flavirostris* and others as *erythrorhyncha*. Two juveniles of the above description collected by J. P. Cook at Maymyo has it noted on the original label that the bills were light red in one and scarlet in the other. In the first plumage the bill is black in both species but this noting would link the all-white head with *erythrorhyncha*.

Two others a ♂ and a ♀ from Dakuri, Kumaon, whence 2 adults were also collected, have their crowns sooty black, followed by

a broad white patch tapering down on the black of the neck. They agree with Biswas's description of young *erythrorhyncha* (JBNHS 60, p. 648), but the adults from the same place are smaller and can be included among the variations in *flavirostris*. The evidence available suggests that this is the juvenile plumage of *flavirostris*, with the white being later reduced to the collar-like band in the adult. Intermediate phases exist, depending to some extent upon the method of preparation of the skin. It is significant that the 3 yellow-billed birds illustrated in Gould's BIRDS OF ASIA and marked *A. flavirostris cucullata* by A. Rutgers in 1969, all have the forecrown black, followed by white extending to the nape.

Psilortinus albicapillus described by Blyth at the same time as *C. flavirostris*, *C. e. occipitalis* and *C. e. magnirostris* (1846, JASB 15, p. 27) was admittedly a juvenile and agrees with the juveniles of *erythrorhyncha* above.

As in the case of the previous species, the large proportion of unsexed birds and others in juvenile and intermediate plumage do not make it worthwhile listing the measurements. The bills are no smaller than in *magnirostris*.

1028 *Cissa erythrorhyncha magnirostris* (Blyth) (Ya-Ma-Dong Mountains separating Arracan from Pegu) Burmese Redbilled Blue Magpie 1:42

8 : 6 ♂♂ (1 juv.) 1 ♀ 1 o? juv.
1 Dimapur, 1 Kanglotomis, Manipur, Assam; 2 Tiddim, Chin Hills, 2 Maymyo, 1 Thayetmyo, Burma; 1 Crawford Market, Bombay, origin?

These birds are slightly darker above but barely separable from *occipitalis* (1027) and certainly do not agree with the original description of *magnirostris*. The bill is not 4.5 mm longer and there is no large bare patch near the eye. The two from Manipur and one from Thayetmyo differ from the Himalayan

population in being darker and more suffused with purple-blue on the upperparts, but Hume (S.F. 6, p. 385) quotes Lt. Ramsay as saying that with large series of both groups, he has seen a specimen of *occipitalis* with plumages in all respects as fine as the best of my Burmese skins". Ramsay also says that though some of the Burmese specimens have enormous bills, others have them as small or smaller than Himalayan birds. He adds that the only constant point of difference between Burmese and Indian birds is in the colouring of the bill(?), feet and irides as pointed out by Hume on Captain Fielden's authority (S.F. 3, p. 145), i.e. the legs are scarlet instead of reddish orange of *occipitalis* and the irides are of different shades of brown, but never red. INDIAN HANDBOOK states that irides of *occipitalis* are brown or red-brown and those of *magnirostris* the same'.

Hume (loc. cit.) concludes "...it seems to me very doubtful whether the species (*magnirostris*) can be maintained. What is really wanted is a large and carefully sexed series from Pegu and the Arracan Hills".

1029 *Pica pica bactriana* Bonaparte (Kandahar) Kashmir or Whiterumped Magpie 1:38

28 : 15 ♂♂ 8 ♀♀ 5 o? (1 juv.)
1 Sulaimaniyah, Iraq; 1 Baghe-e-Jawar (4 m. S.W. of Shiraz), 1 Baghe Jaffrain, 1 Baghe Rezi, 10 Shiraz, 1 Amirabad, Birjand, 1 Neh, Kain, Iran; 1 Iggiz Yar, Chinese Turkestan; 1 Razani, North Baluchistan, 1 Razmak, South Baluchistan, 1 Kelat, 1 Toba, Quetta, 1 Devankot, Baluchistan; 4 Chitral, N.W.F.P.; 2 Ugu 12000', Indus Valley, Ladakh.

In some specimens, March to May, the rump is greyish, but this character does not appear to be restricted to any age(?) or area. HANDBOOK OF BRITISH BIRDS (1938, 1:28) refers to the rump in nominate *pica* "white or brownish white to brown (in British specimens never

very white and often nearly black)".

Measurements on p. 95.

1030 *Pica pica bottanensis* Delessert (Bhutan) Eastern Blackrumped Magpie 1:39

1 ♂ Wangadi Cholung, Bhumtang Valley, Bhutan.

Together with six additional specimens collected by Sálím Ali at Bhumtang in Bhutan in 1973, but not yet registered, they have a larger wing, a proportionately shorter tail and a black rump, which leave no doubt regarding the validity of this race.

Measurements on p. 95.

EL *Pica pica sericea* Gould (Amoy) Chinese Magpie

5:4 ♂♂ (1 juv.) 1 ♀

1 North Shan States, 1 South Shan States, 1 Kyat-yin-Mogok Road, Ruby Mines District, Burma; 2 Peking, China.

These birds are not very distinct from *bactriana* but the pair from Peking show more blue on the wings and in series there is less white visible above. In the juvenile the black is replaced by brown and there is very little white on the rump.

The tarsus appears longer than in *bactriana* and the tail proportionately shorter. Stuart Baker quotes Gould as having affirmed the former.

Measurements on p. 95.

1031 *Dendrocitta vagabunda pallida* (Blyth) (Galkund, Surat Dangs, Gujarat) Western Tree Pie.

(a) 15: 8 ♂♂ (2 juv.) 4 ♀♀ (1 juv.) 3 ♂♂ (2 juv.)

1 Navashar, Jullundur, 3 Ambala; 1 Bahawalpur; 1 Delhi; 1 Bharatpur, Rajasthan; 1 Jacobabad, N. Sind, 1 Khori, 2 Luka, 3 Jah, Tatta, 1 Londi, Karachi.

No. 20347 ♂ from Luka, Tatta is dark rufous below.

(b) 20: 4 ♂♂ (2 juv.) 16 ♀♀ (6 juv.)

1 Hamavas Lake, Pali, Jodhpur; 1 Deesa, Palanpur; 3 Vaghjipur, Mehsana; 1 Hingolghad, Jadsan, 1 Amreli, 1 Gir, 1 Patan (?), Kathiawar; 2 Victoria

Park, Bhavnagar; 1 Cambay City; 1 Galkund, 1 Mheskhatri, 1 Pimpri, Surat Dangs; 3 Suraimal, Thana, 1 Tanda, 1 Kuno, Gwalior.

The type locality of *pallida* has had many vacillations. Blyth described it from a specimen purchased at Calcutta (now the type locality of nominate *vagabunda*) but originally said to have come from the north-western Himalayas (the type locality of *bristoli*). This was restricted by Ticehurst to Simla (1922) and then to Galkund, Surat Dangs, by Paynter who, admitting the possibility of the original description referring to *parvula* from the southwest or *vernayi* from the south and south-eastern India, expressed his reluctance to change the name which had been applied for more than a hundred years. While I agree with his sentiments, I do not know if it is permissible to ignore the original description, though the type locality may be proved or presumed to be wrong. As supporting the original designation of the north-western Himalayas, it may be worth mentioning that *Psilorhynchus albo-capillus* now *Urocissa erythrorhyncha occipitalis* was described by Blyth from the same collection and this does not occur anywhere except in the Himalayas. Of course, the collection could have included birds from different places.

As explained under *bristoli*, the specimens from the Punjab and Sind appear nearer to *pallida* both in size and colour and are included here, as was done by Paynter. Accepting, however, the type locality as restricted to the Surat Dangs, the northern birds can be separated from the southern topotypical group by their slightly darker upper and lower parts and the fact that the tail/wing ratio is invariably over 160. In this subspecies the first year birds, distinguished from the adults by the white tips to the black non-central tail feathers, show no other differences in colour from the adults.

Measurements on p. 96.

1031a **Dendrocitta vagabunda bristoli** Paynter (Jabri, c. 11 miles west of Murree, alt. 900 metres, Hazara District, West Pakistan) North Western Tree Pie.

2 ♂♂: 1 2220' Rawalpindi; 1 2500' Kalka, Ambala District, Punjab.

Both specimens are outstandingly large and dark and agree with Paynter's original description of *bristoli* (1961, *JBNHS* 58:381) in which he referred to birds from the plains near Ambala and several other places in the Punjab and Sind, as *pallida*. INDIAN HANDBOOK (5, 216) indicates *bristoli* as extending over the whole of the Punjab and Sind and though clines are referred to in the text, birds from the latter places appear much more like *pallida* from Gujarat and I am listing them separately under that race.

In both the specimens, the tails (315,300) are shorter than in the cotypes (334, 342, 363) but this may be due to different methods of measurement, which may also affect the wing/tail ratios.

Measurements on p. 96.

1032 **Dendrocitta vagabunda vagabunda** (Latham) (India, restricted to Calcutta) Northeastern Tree Pie. 1:48

43: 25 ♂♂ (12 juv.) 13 ♀♀ (8 juv.) 5 o? (1 juv.)

1 Kodus, Thana; 1 Borivli, 1 Powai, Salsette, Bombay; 1 Khandala; 1 Akibidu, West Goa; 1 Saugor, 2 Chikalda; 1 Ambakona, 1 Jabalpore, 1 Tamia, Chindwara; 2 Wamanpalli, Chanda; 2 Supkar, 1 Sonwani, Balaghat; 1 Bhopalpatnam, 1 Konta, 1 Darbha, 1 Antagarh, 1 Chota Dongar, Bastar; 1 Bhavanipratapur, Kanker; 2 Badrama, Bamra, 1 Keonjhar, 1 Tikerpara, Angul, 1 Raipathar, Phulbani, Orissa; 1 Sankrametta, Vizagapatam District; 1 Partapur, 1 Nepal; 2 Meerut, 1 Bareilly, 1 Pilibhit Terai, U.P.; 1 Madhubani, 1 Baghowni, 1 Saran, Bihar; 1 Nanhati, 24-Parganas, Bengal; 2 Dibrugarh, Assam, 3 Upper Burma.

There is considerable diversity in colour and

size between individuals which it is not possible to isolate by sex, age or season. The lack of series from any one place prevents any understanding of the sequence of plumages and/or seasonal changes, if any, and it is quite possible that one or more undescribed race may be found within the conglomeration above.

Two young from Wamanpalli, Chanda (No. 21186) and Akibidu, West Goa (No. 23333) have very pale underparts, as in adult *vernayi*, and which is accepted as the first plumage in all races, but the black tail feathers are not tipped white. Another collected at Chanda at the same time (May) is slightly darker, but paler than most other *vagabunda*, and may be closer to *vernayi*.

In series the birds with white tips to the tail feathers (included in juveniles) are slightly paler than the adults but individuals are as dark just as some of the adults are as pale. Among the adults, the five with the darkest underparts are slightly but consistently larger than the others.

The three unsexed skins from Upper Burma show a lot of rufous above and below but can be left in this group both in colour and measurements.

Measurements on p. 96.

1033 **Dendrocitta vagabunda parvula** Whistler & Kinnear (Malabar) Kerala Tree Pie. 1:48 (Part)

8: 4 ♂♂ 3 ♀♀ 1 o?

1 Karkala, S. Kanara; 1 Kalladikol, Palghat Gap; 1 Tope, 1 Kodi Motor Road, Palni Hills; 1 Thekkaddy, 1 Thattakad, Periyar; 1 Aramboli, 1 Jamestown, Kanyakumari.

These are slightly smaller than *vernayi* and with darker underparts (paler than in *vagabunda*) which show some variation in the small series. The unsexed bird from Karkala, South Kanara, from the accepted range of this sub-

species, is exceptionally dark rufous below and has dark upperparts grading into the black of the head. It is marked juvenile and has white tips to the black rectrices and a pale rump. No. 4515, a male from Thekaddy, Periyar lake has underparts as pale as in *vernayi*, but a small 135 mm wing and is presumably in its first plumage.

Measurements on p. 96.

1034 *Dendrocitta vagabunda vernayi* Whistler & Kinnear (Nallamalai Range, 2000', S. Kurnool) Southeastern Tree Pie 1:48 (Part)

12: 5 ♂♂ 6 ♀♀ 1 ♂?

1 Chitteri Range, Salem, 1 Edubathi, Billigirirangans; 1 Shevaroy Hills; 2 Palkonda Hills; 1 Nallamalai Hills; 1 Dharwar-Haliyal Road, Mysore, 1 Uttoor, 1 Mananur, 1 Kaulas, 1 Farahabad, S.E. Hyderabad; 1 Pootah, North Arcot.

The northern birds grade into *vagabunda*. The juvenile, in the first plumage, as in the other races, has pale underparts like the adult of this form. There is a wide range of variation in the measurements of the above specimens and this is no doubt due to convergence with *vagabunda* on the north and *parvula* on the west.

Measurements on p. 96.

EL *Dendrocitta vagabunda sclateri* Baker (Mt. Victoria, Chin Hills, Burma)

Chin Hills Tree Pie

5: 4 ♀♀ 1 ♂?

2 *Maymyo*; 1 *Mibauk Village*, 1 *Khayank Chaung*, *Thayetmyo District*; 1 *Legangyi*, *Henzada, Burma*.

These birds have very little rufous on the

* The original label(s) are missing and the entries in both the old (and new) register and the present labels show the locality as "Berimani, South Konkan", and I cannot find any place of this name in the postal directory. While it may be a village without a post office, the bird was collected by T. R. Bell who served in Kanara and the district is certainly an error in transcription and should be *Kanara* and not *Konkan*.

upperparts, the black of the head is not very distinct from the mixed colour of the back and all have pale rumps.

Measurements on p. 96.

1035 *Dendrocitta frontalis frontalis* Horsfield (Assam) Blackbrowed Tree Pie 1:54

4: 2 ♂♂ 2 ♀♀

2 Margherita, 1 Dibrugarh, Assam; 1 *Lonkin (Chindwin Expedition) Upper Burma*.

Wing ♂♂ 130, 132 ♀♀ 124, 128 (IH. ex Baker ♂♀ 120-126) bill 26.3 27, 27.9(2) (c. 25); tarsus 24, 25, 27, 27.5 (c. 30); tail ♂ 206, 220, ♀ 204, 205 (245-255).

The male from Margherita (No. 273) has the nape and upper back almost white, which portion in the other male (No. 276) is also whiter than the grey in the two females, as well as in two additional females from N.E.-F.A. (Arunachal Pradesh) not yet registered. It is perhaps a sexual difference.

1036 *Dendrocitta leucogaster* Gould (Malabar Coast) Whitebellied Tree Pie 1:51

10: 8 ♂♂ 2 ♀♀

1 Castle Rock, N. Kanara; 1* Berimani, S. Kanara; 1 Wynaad; 1 Parambikolam, Cochin; 3 Thattakad, 1 Promacora, 1 Ponmudi, 1 Thekadi, Travancore.

No. 4520 a male with enlarged gonads (9 × 5 mm) collected at Thattakad differs from all the others in having black edges to the white upper tail-coverts.

Stuart Baker's Fauna referred to the tarsus as "about 30 mm" which is revised in IH 5:225 to "32-34". My measurements agree with the former.

1037 *Dendrocitta formosae occidentalis* Ticehurst (Simla) West Himalayan Tree Pie 1:52 (Part)

11: 8 ♂♂ (2 juv.) 3 ♀♀ (1 juv.)

7 Simla & Simla Hills; 1 Tara Devi, Keonthal; 1 Phata, Gupta Kashi, Gadhwal; 1 Pithoragarh, 1 Gomai, Almora.

Table of measurements in Note on Validity of *D. f. sarkari*, p. 143 infra.

1038 *Dendrocitta formosae himalayensis*
Blyth (Sikkim) East Himalayan Tree Pie 1:52
24: 10 ♂♂ 12 ♀♀ 2 o?

1 Hathiban, 1 Bans Bihari, 1 Godavari, Nepal;
1 Majhkali, Ranikhet, 1 Kurseong, 1 Sevoke, Dar-
jeeling; 1 Rinchingpong, W. Sikkim; 2 Dibrugarh,
1 Margherita; 2 Denning, Lohit Valley; 1 Kang-
pokpi, Manipur; 2 Humgrum, 2 Haflong, N. Cachar,
1 Bagho Bahar, 2 Roopchena, Cachar; 1 *N. Krang*,
Upper Burma; 2 south-east of, 1 *Maymyo, Burma*.

The three from Burma have much whiter
underparts than the others and, together with
many from Assam and eastwards, show more
brown than dusky black on their chins.

Peter's CHECK-LIST 15, p. 248 (1962) errs
in referring to *D. f. assimilis* Hume from the
Andamans.

Table of measurements in Note on Validity
of *D. f. sarkari*, p. 143 infra.

1039 *Dendrocitta formosae sarkari* Kinn-
near & Whistler (Anantgiri, Vizagapatam).

9: 4 ♂♂ 5 ♀♀
2 Anantgiri, Vizagapatam, 1 Jeypore Agency; 5
Berbera, Puri, 1 Mahendragiri, Orissa.

For Note on Validity of this race. (See
p. 142.)

1040 *Dendrocitta bayleyi* Tytler (Anda-
mans) Andaman Tree Pie 1:55

7: 3 ♂♂ 4 ♀♀
4 Wrightmyo, 2 Chirria Tapoo, 1 S. Andamans.

Of 2 females collected at Wrightmyo on 13
February, one has darker underparts and the
colours of the head and tail more clearly de-
fined. This had bright yellow irides *contra*
greenish yellow in the other, and the former
would appear to be a character of maturity.

EL *Crypsirina temea* (Daudin) (Africa, in
error for Java) Black Racket-tailed Magpie
2: 1 ♂ 1 ♀

1:56
1 *Kyibin*, *Henzada*, 1 *Ataran*, *Amherst, Burma*.
Wing ♂♀ 117, 119; bill 25.3, 21.8. The ♂ has
a noticeably larger bill.

EL *Crypsirina cucullata* Jerdon (Thayet-
myo, Burma) Hooded Racket-tailed Magpie
1:57

6: 2 ♂ (1 juv.) 4 ♀♀ (2 juv.)
1 *Mungin, Magwe*; 1 *Pyabwe, 700'*, *Yamethin*;
1 *Tarakmaw*, 1 *Kandin*, 1 *Prome*, 1 *Rangoon*,
Burma.

♂♀ Wing 102-109; bill 18.3-19.5; tarsus 23.5-25;
tail ♂ 162, 165; ♀ 173-175.

The 3 adults have the bill all black, their
plumage clear grey, while the younger birds
have a yellow patch at the gape and the plum-
age washed with pinkish.

1041 *Podoces humilis* Hume (Kitchik Yi-
lak-Sinkiang, near Sanju, Yarkand) Hume's
Ground Chough 1:71

2: 1 ♂ 1 ♀
1 *Chusha, Tibet*; 1 *Zunthulbuk, 16000'*, *W. Tibet*.

EL *Podoces ploskei* Zarudny (Alkor, East-
ern Iran).

2: 1 ♂ 1 ♀
2 7000', *Gulugan Plain 60°E×31°N'*, *East*
Iran. ♂♀ Wing 123, 115; bill 37.5, 32.5; tarsus
44, 37; tail 88, 85.

EL *Podoces hendersoni* Hume (Sinkiang,
on the way to Yarkand).

3: 2♀ 1 o? juv.
2 *Opal, 4400'*, 1 *Kashgar, Chinese Turkestan*.

The juvenile is one of the 3 young found
in a nest on the ground on 1 May 1931 (C.
H. Sherriff). The mother has a longer (46 cf.
42.5 mm) and more massive bill than in the
unsexed adult which was registered as *bid-*
dulphi.

EL *Podoces biddulphi* Hume (Maralbashi,
Sinkiang).

3: 1♂ 1♀ 1o?
2 *Keriya, 4300'*, *Karakoram Expedition*; 1 *Chinese*
Turkestan.

1042 *Nucifraga caryocatactes multipunc-*
tata Gould (N. W. Himalayas, restricted to

Kashmir, north of the Pir Panjal Range).

Larger-spotted Nutcracker 1:67

5: 3 ♂♂ 2 ♀♀
1 Chitral, 7000', N.W.F.P.; 1 Yusmarg, 1 Gul-
marg, 1 10000' Ketri, Badrawan, 1 Kashmir.

Measurements on p. 97.

1043 *Nucifraga caryocatactes hemispila*
Vigors (Himalayan Mountains, restricted Sim-
la-Almora) Himalayan Nutcracker 1:66

(part)

12: 6 ♂♂ 5 ♀♀ 1 ♂? (fledgling)
2 Nagar, Kulu, Punjab; 4 Koti State, 1 Simla, 1
Bogi, Himalayas (?), 1 Garhwal, 1 near Tonglu,
Darjeeling Division; 2 11000', Thunsi, Nepal.

Measurements on p. 97.

1044 *Nucifraga caryocatactes macella* Tha-
yer & Bangs (Hsien-Shan-Hsien, 7000', Hupeh,
China) Yunnan Nutcracker 1:66 (part)

3 ♂♂ (1 juv.)
1 Lachen, N. Sikkim; 1 *Etatin*, 7000', 1 *Yigang*
Valley, 7500'. *Mishmi Hills, Burma.*

Though these cannot be separated from
1043 from the west by the size of, or the num-
ber of spots, or any other colour character, the
bills are distinctly thicker.

Measurements on p. 97.

EL *Nucifraga caryocatactes rothschildi*
Hartert (s. of the Issyk Kul, Russian Turkes-
tan) Tian

1 ♂? *Bostan Tarek, Chinese Turkestan.*

The white spots are fewer and larger than
in both *hemispila* and *macella* above.

1045 *Pyrhcorax graculus digitatus* Hem-
prich & Ehrenberg (Syria) Himalayan Yellow-
billed or Alpine Chough 1:70

11: 4 ♂♂ 6 ♀♀ 1 ♂*? juv.
6 Chitral, N.W.F.P.; 1 Dangail, Kishtwar, Kash-
mir; 1 Sissoo, 10000', Lahul; 2 Matari, Niti, Garh-
wal, 1* collected by S. L. Whymper, probably Garh-
wal or Kumaon, U.P.

♀ No. 348 from Chitral has its legs and
feet black.

Measurements on p. 97.

EL *Pyrhcorax pyrrhcorax docilis* (Gme-
lin) (Gilan, N. Iran).

4: 2 ♂♂ 2 ♀♀
1 s. of *Doneh Pass, Luristan*; 3 *Kidri, 4000'*, near
Kain, Iran.

The three from Kidri (1st year birds?) are
marked *pontifex* which is now accepted as a
synonym of *docilis* (Vaurie). They differ from
all the others in having the wings and tails
brownish, contrasting sharply with the black
of the head, back and rump.

Measurements on p. 97.

1046 *Pyrhcorax pyrrhcorax centralis*
Stresemann (Djarkent, Russian Turkestan)
West Himalayan Redbilled Chough 1:68
(part)

1 ♂? Quetta Museum.

The 289 mm wing has narrow primaries, a
slightly greenish tinge and the sixth primary
13 mm shorter than the 5th. These characters
recur in other forms further east and the spe-
cimen is left here on geographical (?) grounds.

Measurements on p. 97.

1047 *Pyrhcorax pyrrhcorax himalaya-
nus* (Gould) (Himalaya Mountains, restricted
to Kumaon) East Himalayan Redbilled
Chough 1:68 (part)

6: 2 ♂♂ 2 ♀♀ 2 ♂? (1 juv.)
1 Rohtang Pass, 10000', 1 Kyclang, Lahul; 2
Badrinath, Garhwal, 1 Dakuri, Kumaon; 1 no loca-
lity (juv.).

The material available all appears to be
from within the accepted range of *himalaya-
nus*. Some show pointed wing quills and there
appear to be no specific characters which
would separate them from *centralis*. Including
the 3 specimens from Bhutan (not yet regis-
tered), the largest wing is 310 mm, while
Meinertzhagen, when dealing with this race
(*Ibis* 1927, p. 372) measures 7 males from

Sikkim and Ladak, 315 to 340 av. 328.

No. 339 a juvenile from the Jones Collection is marked *Pyrhcorax graculus*.

In INDIAN HANDBOOK (5, p. 242) the bill is said to be "widely variable 50-100 mm". The last figure if correct must refer to an aberration.

Measurements on p. 97.

EL *Lycocorax pyrrhopterus pyrrhopterus* (Bonaparte) (Gilolo, Northern Moluccas)

1 Halmahera, Northern Moluccas.

EL *Corvus dauuricus* Pallas (circa Baikal)

2 : 1 ♂ 1 ♀ Peking, China (Nos. 130 & 131)

EL *Corvus torquatus* Lesson (China)

3 : 2 ♂♂ 1 ♀

3 Temple of Heaven, Peking.

1048 *Corvus splendens zugmayeri* Laubmann (Las Belas, Baluchistan) Sind House Crow I:34

33 : 19 ♂♂ 11 ♀♀ 3 o?

3 Rawalpindi, N.W.F.P.; 1 Dharmi State, 5000', N.W. Himalayas, 1 Gunderbal, near Srinagar, Kashmir*, 1 Jullunder, 1 Multan, 1 Mubarakpur, 3 Ambala; 1 Dadil, 2 Sehwan, Larkana; 2 Bhung, Bahawalpur, 3 Mewashah, 1 Korangin, 1 Dhakeri, 1 Dakejee, Karachi, Sind; 2 Bikanir, 2 Pirotan, Gulf of Kutch, 2 Mandvi, 1 Tapkeshwari, Bhuj; 1 Dwaraka, Okhamandal, 2 Hingoljad, Jasden, Kathiawar, 1 Radhanpur, North Gujarat.

Ticehurst (1922, *Ibis*, p. 536) said "The Sind race differs from the typical one in having a much paler collar and underparts (as Hume noted), pale smoke grey in fresh feather, creamy grey or dirty white in worn dress". Young birds are darker than the adults.

As in nominate *splendens* (q.v.) there is some variation in the shade of grey on the neck. Of the three from Rawalpindi (all Feb-

ruary) the two males are pale, while the female could be matched with many from Peninsular India. Similarly, the four from Ambala district are a little darker and intermediate between nominate *splendens* and *zugmayeri*. All 12 (8 ♂♂ 4 ♀♀) collected between 26 April and 13 October have worn feathers round the neck, which show collars of sandy or dirty white in varying shades, quite different from that attained by nominate *splendens*. Accepting this as a racial character, the specimens from Pirotan in the Gulf of Kutch, Kutch and Saurashtra, all agree with *zugmayeri*, though Sâlim Ali has specifically held that this race does not occur south of the Rann, and identified the Kutch birds (also one from Larkana, Sind) as of the nominate form. Birds from Larkana and Bhung, Bahawalpur, have the palest collars. Of the two females from Mandvi, Kutch, one agrees with *zugmayeri* and the other with nominate *splendens*.

The four from Jullunder (1), Multan (1) and Bikanir (2), are albinoids in varying phases of grey and brown, and are included here on geographical grounds. The two from Bikanir were obtained in 1913 and 1940.

Measurements on p. 98.

1049 *Corvus splendens splendens* Vieillot (Bengal) Indian House Crow I:33

35 : 16 ♂♂ (2 juv.) 12 ♀♀ (2 juv.) 7 o? (1 head only, 1 pure, 1 partial albino, 1 isabelline).

1 Bharatpur, 1 Meerut; 1 Jalar, Jodhpur; 1 Gir, Amreli; 5 Bandra, 1 Andheri, 9 Bombay; 2 Kihim, Kolaba; 2 Nagpur; 1 Ulavi, 1 Kambally Kopa, Sagar, Mysore; 1 Edanad, Chengamner, 1 Jamestown, Kanyakumari; 1 Vyampatti, Trichinopoly, 1 Karumbapatti, Salem; 1 Bhopalapatnam, Bastar; 1 Bhagowni, 1 Darbhanga, Bihar; 1 Calcutta; 2 no locality.

Reference has already been made to the appreciable variations in colour in *zugmayeri* and it is no less in this subspecies. ♂ No. 90 from Vyampatti, Trichinopoly, (9 July) has

* Whistler (JB 29:160) referred to an isolated colony in the Kashmir Valley and Ticehurst (JB 31: 692) states that its occurrence at Muscat in Arabia must be due to introduction.

a grey neck as pale as others listed as *zugmayeri*, but the nature of the worn grey feathers in the latter is distinctive and I would prefer to leave the birds from the Gulf of Kutch and the northern and western coasts of Kathiawar with them. A single ♂ (No. 19789 dated 15 March) from the Gir, in southern Kathiawar, appears to be nominate *splendens*. Some additional specimens of this common species from different parts of Kathiawar, Gujarat, Rajasthan, Delhi, etc., are necessary to permit more certain decisions regarding the determination of the limits of the two subspecies.

Measurements on p. 98.

1050 *Corvus splendens protegatus* Madaras z (Mt. Lavinia, W.P., Ceylon) Ceylon House Crow 1:35

3: 1 ♂ 2 ♀♀
1 Colombo, 2 Ceylon.

Birds from Kerala are said to be of this subspecies but I would prefer to leave the material available among the variations in nominate *splendens* which does become a little darker in the southwest.

Ceylon birds the colour of the hindneck grades almost imperceptibly into that of the back, but the line of demarcation is distinct in Indian birds.

Measurements on p. 98.

1051 *Corvus splendens maledivicus* Reichenow (Maldives).
nil.

EL *Corvus splendens insolens* Hume (Tenasserim) Burmese House Crow 1:34

8: 4 ♂♂ (1 juv.) 4 ♀♀ (1 juv.)
2 Mayunyo; 6 Prome, Lower Burma.

The adults show no trace of a pale collar. The three adult females, all taken on 8 March 1929, are duller than the males. Both juveniles, though fully feathered, are browner than the adults.

1052 *Corvus frugilegus frugilegus* Linnaeus (Sweden) Rook 1:14

14: 5 ♂♂ (2 imm.*) 4 ♀♀ (2 imm.) o? 5 (3 imm.) * with nasal bristles

2 Sheikh Saad, 2 Shatt-al-Adhain. River Tigris, 1 Samarra, 1 Baghdad, 2 Mesopotamia; 2 Meshed, 3000', 1 Anirabad, near Birjand, Iran; 2 Rawalpindi; N.W.F.P.; 1 Jhelum, Punjab.

Though Hartert's *tchusii* is no longer accepted, the last three from Pakistan have noticeably narrower and longer (♂ 63.5 cf. 53.5-62 av. 57.7; ♀♀ 60, 61 cf. 54, 57.1 in 2 imm.) bills, the main characters on which this was separated (type locality Gilgit).

EL *Corvus frugilegus pastinator* Gould (Chusan, China).

1 ♂ Temple of Heaven, Peking.
Wing 329; bill 60.7; tarsus 49.5; tail 190.

1053 *Corvus monedula monedula* Linnaeus (Sweden) Jackdaw 1:36

8: 6 ♂♂ (1 juv.) 1 ♀ juv. 1 o? juv.

1 Baghdad, Mesopotamia; 2 Chitral, 2 Peshawar, N.W.F.P.; 1 Srinagar, 1 Kashmir Valley, 1 Kashmir.

Fischer's *soemmeringi* from Moscow, though accepted in Peter's *Check-list* (1962), is not recognised in INDIAN HANDBOOK.

The bird from Baghdad has the smallest wing and bill.

Measurements on p. 97.

1054 *Corvus macrorhynchos intermedius* Adams (Kashmir, Dagshai, and Simla, restricted to Kashmir) Himalayan Jungle Crow. 1:28

26: 18 ♂♂ 6 ♀♀ 2 o?

1 Khalid Drosh, 2 Chitral, N.W.F.P.; 1 Marge, above Kongan, Sind Valley, 1 Wulur Lake, 2 Lidar Valley 9500', 1 Gilgit, Kashmir; 1 Keonthal, 1 Koti, 8 Simla; 6 Mussoorie, 1 Darjeeling 5500', U.P.; 1 no data (A. E. Jones Collection No. 14).

Except for 3 ♂♂ Nos. 38 Gilgit, 39 and 44 Lidar Valley, and 1 ♀ No. 15642 Simla, all the others have white bases to the feathers of the nape. No. 44 from Lidar Valley has

brown underparts. The bill illustrated in INDIAN HANDBOOK (5, p. 252) is larger than in any specimen available.

Measurements on p. 98.

1055 *Corvus macrorhynchos levaillantii* Lesson (Bengal) Eastern Jungle Crow. 1:2
8: 4 ♂♂ 2 ♀♀ 2 o?

1 Bourini, 1 Godavery, Nepal; 1 *Gangtok, Sikkim; 1 *Tezu, Lohit Valley, Assam; 1 Tiddim, Chin Hills, 1 s.e. Maymyo, 1 *Kyithe, Prone; 1 *Legongyi, Henzada, Burma.

No topotypes are available and these birds separated on geographical groups are not distinctly separable from *intermedius*. The deeply bowed-bill is visible only in four (2 ♀♀ 2 o?) marked with an asterisk, but 6 males (no female) of *intermedius* from Mussoorie, Simla and Gilgit share this character.

All the birds from Chitral, Kashmir and Simla, have their tail-wing ratio over 60 (upto 67), while those from Mussoorie and eastwards average under 60%. The relatively longer tail appears to be a consistent feature of the western birds separating them from all the other races referred to here. Except in Nos. 37 Gangtok and 55 Tiddim, Chin Hills, the nape feathers are grey.

Measurements on p. 98.

1055a *Corvus macrorhynchos andamanensis* Tytler = Beavan (Port Blair, Andamans) Andaman Jungle Crow.

7: 4 ♂♂ 2 ♀♀ 1 o?

1 Middle Buton I., 2 Wrightmyo, 4 Port Blair, South Andamans.

The nape feathers, as in *levaillantii*, are both grey or white and the measurements of the wing and tail can be included with them; but the bills are much heavier (the largest ♂ 65.5 not deeply bowed) which, together with the plaintive and less harsh call (see *JBNHS* 61, p. 555), appear to be sufficient to retain the island race.

Measurements on p. 98.

1056 *Corvus macrorhynchos tibetosinensis* Kleinschmidt & Wiegold (South-east Tibet in the Sifan Region) Tibetan Jungle Crow.

2: 1 ♂ 1 o?

1 Sadiya, Upper Assam; 1 no data.

The Sadiya bird has an enormous bill, and is marked *tibetosinensis* by Sálím Ali, who (*JBNHS* 48, p. 36/7) refers to this race other specimens taken in the area including ♀ 4513 taken at Tezu, Lohit Valley. This specimen has a small 297 mm wing and I have left it under *levaillantii*.

The second bird with no data was listed with *Corvus corone orientalis* but the bristles over the nostrils are not coarse and stiff as in that species.

Much of the literature relating to earlier work on this species is not available in Bombay, and the whole group needs re-examination.

Measurements on p. 98.

1057 *Corvus macrorhynchos culminatus* Sykes (Dukkun = Poona) Indian Jungle Crow.

34: 11 ♂♂ 17 ♀♀ 6 o?

2 Karnal, 3 Ambala, Punjab; 1 Gir, 1 Ajwa, Baroda; 1 Thana, 1 Malad, 1 Bandra, 3 Mahim, 2 Bombay; 1 Kihim, Alibag, Kolaba; 2 Khandala, 1 Khangaon, Dhond, Poona; 1 Santgal, North Kanara; 2 Hikkeri, 1 Khambikoppa, Sagar, 1 Honametti 5000', Mysore; 2 Patton, Trivandrum, Kerala; 2 Chitteri Range, Salem, Tamil Nadu; 1 Raipur tal, Nellore, A.P.; 1 Gondia, 2 Darbha, Bastar, M.P.; 1 Kanpur, U.P.; 1 ?

These are the darkest black. Female No. 32 from Honametti 5000', Mysore, has the largest wing (315), bill (62) and tail (185), while the tail-wing ratio remains under 60 (58.7%).

Measurements on p. 98.

EL *Corvus macrorhynchos colonorum* Swinhoe (northeastern Formosa).

1 ♀ Peking, China.

This is very dull coloured, but was collected in 1900.

1058 *Corvus corone orientalis* Eversmann (Naryu R., Turkestan) Eastern Carrion Crow. 1:24

4 : 3 ♂♂ 1 ♀

1 Kashgar, China; 2 Ugu Nulla 14000', 1 Moulbekh, Ladakh.

The last bird collected on 3 August 1976 has the 3 outer primaries and most of the secondaries brown, the others black. The feathers of the head and body are mostly brown, with occasional black ones showing through. The tail is incomplete and in heavy moult. Sálím Ali and S. A. Hussain who obtained it noted others completely black in the same area.

Measurements on p. 99.

1058a *Corvus corone sharpii* Oates (Mardan, Punjab) Eastern Hooded Crow. 1:32

10 : 7 ♂♂ 2 ♀♀ 1 ♂?

1 Amara, 1 Baghdad, Mesopotamia; 1 Teheran, 3 Shiraz, 1 Birjand, 3 Meshed, Iran.

No. 76, Teheran, is a juvenile female with a yellow bill, *contra* black in all the others.

Measurements on p. 99.

EL *Corvus corone capellinus* Sclater (Fao, Southern Iraq)

8 : 1 ♂ 3 ♀♀ 4 ♂?

1 Lake Akkakurf, near Baghdad, 1 Mohanmarrah, 1 Amara, 2 Basra, 2 Mesopotamia; 1 Persian Gulf.

Measurements on p. 99.

EL *Corvus corone cornix* Linnaeus Hooded Crow

1 ♀ Mohses, Hungary.

The bill is appreciably shorter than in the other races.

Measurements on p. 99.

1059 *Corvus corax subcorax* Severtzov (N.W. & S.E. Turkestan) Punjab Raven

15 : 5 ♂♂ 7 ♀♀ 3 ♂?

1 Sheik Saad, Iraq; 2 Amirabad, 2 Birjand, E. Persia; 1 Chaman, 1 Quetta, Baluchistan; 1 Razani, Waziristan; 1 Rawalpindi, N.W.F.P.; 1 Chaurkana, Gujranwala, 1 Yahore, Punjab; 1 Bahawalpur; 1 Jacobabad, Upper Sind; 1 Pichial Lake, Jodhpur; 1 Ping Bet, Little Rann, Kutch.

Some with short wings (396-412) including individuals with a brown wash on the head and other parts of the plumage were marked *ruficollis*, but if the wing measurements are considered along with those of the tail and the height of the bill, and the fact that young *subcorax* are brown, they appear to agree more closely with the latter rather than *ruficollis*.

While the wing and tail measurements of *subcorax* and *tibetanus* do not overlap, some of the former have very massive bills.

Measurements on p. 99.

1060 *Corvus corax tibetanus* Hodgson (Tibet) Tibet Raven 1:23

3 : 2 ♂♂ 1 ♀

1 Tso Morari Lake, 2 Ladakh.

While this is larger and with long neck hackles, the latter does not appear to be an infallible character for separating it from *subcorax*, some of which have them long. The last bird (1977) from Tso Morari is jet black, and is outstandingly different from all the others, which have probably faded.

Measurements on p. 99.

1061 *Corvus corax ruficollis* Lesson (Cape Verde Is.) Brown-necked Raven 1:23

10 : 1 ♂ 7 ♀♀ 2 ♂?

4 Amirabad, 2 Birjand, E. Persia; 1 Persian Baluchistan, 1 Chabar, Persian Gulf; 1 Nasirabad, 24 miles west of Turbat, Mekran; 1 Panjgur, Baluchistan.

Both *ruficollis* and *subcorax* have been taken at the same places in eastern Persia, and a reference to the specimens shows that a brown tinge on the upperparts and/or breast need not necessarily identify *ruficollis*. The wing range

in the material identified is appreciably lower than in *subcorax*, and the depth of the bill and the length of the tail are also exclusive.

The short neck hackles, the brown of the head and the measurements all appear to separate this from *subcorax* (*supra*).

Vaurie (1954) held that *ruficollis* is not a subspecies of *Corvus corax* but a separate species. The evidence available certainly supports this view.

Measurements on p. 99.

1062 *Bombycilla garrulus garrulus* (Linnaeus) (Sweden) Waxwing 3:23
 3 ♀ Temple of Heaven, Peking, China.

The bills are longer and the tails shorter than in both Witherby's HANDBOOK and Stuart Baker's FAUNA. If Poljokov's *centralasiæ* (1915, Zansan District and Smeinogorsk, Southwestern Altai) is separable, the present specimens would distributionally be of this race.

Measurements on p. 99.

1063 *Hypocolius ampelinus* Bonaparte (NE. Africa) Grey Hypocolius 1:357
 17:6 ♂♂ 5 ♀♀ 6 ♂?

4 Sera, Tigris, 4 Shatt-al-Adhain, 1 Zad, 3 Baghdad, 1 Garradah, 1 Bushire, Mesopotamia, 2 Kuar Bett, Kutch; 1 Kihim, Kolaba district, Bombay.

The males show the following variations

among themselves which it is not possible to associate with age, season or any other factor:

(a) Two from Garradah (?) and Bushire (14 April) have pale, almost cream-coloured heads, while the two from India, 14 November, Kihim, and 23rd March, Kuar Bett, Kutch, have the head grey, darker than the back, as in the remainder.

(b) Two have black bills, while the others are largely yellow (originally horny) with black tips.

(c) The white patch at the tip of the wing is pure white only in two, the others being sullied by a varying amount of brown.

The females are a pale brown all over with darkening tips to the tail. None of them show their primaries with "black terminal ends and white tips" as per INDIAN HANDBOOK 5, p. 269.

Meinertzhagen (*Ibis*, 1947, p. 666) refers to "juvenile females being like the adult females, but slightly more isabelline, and the juvenile male being similar but with greyish white tips to the wing feathers". Some of the unsexed birds mentioned above may be young males, but of the three with pale tips to the primaries, one is a reliably sexed ♀ from Kutch.

Measurements on p. 99.

MEASUREMENTS

EL. *Garrulus leucotis leucotis* Hume

	Wing	Bill	Tarsus	Tail
♂ ♀	170, 179, 180 (165-177)	30.6, 32, 33 c. 26	32.8, 37.2, 40 c. 45	128, 129, 131 c. 130)
1020-1021 <i>et al.</i> <i>Garrulus glandarius</i> subsp.				
nominate ♂ ♀	180, 184	29, 30.5	31.5, 35.2	140, 141
(BR. HAND. ♂ ♀	174-195	from skull 28-39	39-44	140-152)
<i>haringtoni</i> ♂♂ (2)	177, 177, (170-178)	31, 31.7	40, 43	138 (2)
<i>bispeularis</i> ♂♂ (8)	161-172 av. 166.5 (♂ ♀ 160-178)	27.8-29.6 av. 28.8 c. 26	35-39.5 av. 37.4 c. 32	144-150 av. 147.8 c. 180)
(10 ♂♂ Central Nepal measured by Biswas and quoted in IND. HAND. 5:20, Wing 142-153)				
<i>interstinctus</i> ♂♂ (5)	157-171 av. 166	28.5-30 av. 29	34.7-42 av. 38	130-153 av. 146
<i>bispeularis</i> ♀♀ (5)	170, 172, 173	27.5, 28, 29.5	34, 35, 38	144, 152, 158
<i>interstinctus</i> ♀♀ (5)	162-172 av. 167 (1H ♂ ♀ 160-170)	28.2-30.8 av. 29.7 from skull 29-32	36.3-38.6 av. 37.3 38-43	141-149 av. 144 142-156)

1022 *Garrulus lanceolatus*

	Wing	Bill	Tarsus	Tail
♂ ♂ (7)	143-157 av. 151.7	22.7-26.5 av. 24.1	28.7-36.2 av. 32.8	133-159 av. 145
♀ ♀ (8)	151-157 av. 153.6	23.5-25 av. 24.2	31.8-36 av. 33.8	139-154 av. 144
(IH ♂ ♀	144-158	from skull c. 28	—	141-169 ex Paludin, Biswas)

1023 *Cissa chinensis chinensis*

♂ ♂ (8)	141-154 av. 148.3	30.6-38.7 av. 35.4	34.5, 38-44 av. 40.4	173-212 av. 192
(IH	137-157	from skull 37-42	46-47	193-210)
♀ ♀ (5)	142, 145, 146, 148	34(3), 36.4	39, 40.7(2), 42.5	186, 192, 193, 207
(IH	138-155	34-39	43-44	171-210)

1024 *Cissa ornata*

♂	170	41	185 +
(♂ ♀	155-170	c. 40	235-255)

1029, 1030 *et al. Pica pica* subsp.

	Wing	Bill	Tarsus	Tail	Tail/Wing Ratio
1029 <i>bacriana</i> ♂ ♂ (15)	190-215 av. 205	35.5-41 av. 36.6	42.4-49 av. 45.5	195-286 av. 253	98.5, 114-136 av. 125
" ♀ ♀ (8)	188-219 av. 205	31.4-32 av. 35.6	37-52.7 av. 42.5	225-266 av. 252	121-136 av. 124.5
(♂ ♀	182-227 mostly over 200	30-32	40-45	200-270)	
1030 <i>bottanensis</i>					
♂ ♂	245, 246	38.5, 39	52, 56	240, 250	101.6 (2)
♀ ♀	234, 239	36, 37	51, 52	225, 237	99, 101.2
♂?	235(2), 239	38, 39 (2)	49.5, 50, 52	232, 235, 240	98.7, 100, 100.4
(IH 35 ♂ ♀	224-268 ex Vaurie, Kinnear)				
EL <i>P. p. sericea</i> ♂ ♂	208, 216, 217	35, 36.5, 37	43, 46.5, 50	230, 243, 260	110.5, 112, 120
♀	205	33.7	43	255	124

1031-1034 *et al.* *Dendrocitta vagabunda* subsp.

	Wing	Bill	Tarsus	Tail	Tail/Wing Ratio
♂ ♂					
1031a <i>bristoli</i> (2)	173, 175	30, 28.3	37.5, 32.5	315, 300	182, 171
(Paynter)	157-179 av. 169.9	—	—	265-363 av. 312.6)	—
1031 <i>pallida</i> (a) (6)	157-165 av. 161	29.9-31 av. 30	27.5-32 av. 31	257-271 av. 256	162-169 av. 165
<i>pallida</i> (b) (2)	152, 159	27.7, 30	30.5, 31.5	220, 242	145, 152
juvenile* (2)	142, 165	27	28	261	158
(Paynter a & b)	149-172 av. 153.5	—	—	217.5-297)	—
1032 <i>vagabunda</i>					
dark below (5)	149-168 av. 158	29-31.5 av. 30.2	28.5-32.5 av. 30.2	230-268 av. 250	av. 153
pale below (7)	145-159 av. 152	27.6-31.3 av. 29.8	25-35 av. 28	202-249 av. 238	av. 156.5
juvenile (10)	143-158 av. 150.3	28-31.2 av. 29.4	26.5-32 av. 29.7	196-242 av. 223.6	av. 149
1033 <i>parvula</i> (3)	135, 142, 144	28.8, 29, 30.2	26.6, 27.5, 28	206	141
1034 <i>vernayi</i> (4)	145, 147, 149, 153	28.7-30.3 av. 29.2	28.6-32.7 av. 29.6	183, 212, 220	av. 140
♀ ♀					
1031a <i>bristoli</i>	—	—	—	—	—
(Paynter)	158-174 av. 163.8	—	—	269-349 av. 304)	—
1031 <i>pallida</i> (a) (3)	157-167 av. 161	28.5-30.5	29-32.5	246-270 av. 255	153, 159-168 av. 161
<i>pallida</i> * (b) (8)	144-162 av. 152.5	26.4-31 av. 28	27-31 av. 29.3	216-266 av. 238	146-164 av. 156
juvenile* (6)	145-159 av. 151	26.5, 28.5	30, 30	215-242 av. 225	av. 149
(Paynter a & b)	144-165 av. 153.5	—	—	219-279 av. 243.7)	—
1032 <i>vagabunda</i>					
juvenile	142-160 av. 154	27.6-30 av. 28.8	28.2-32 av. 29.6	210-269 av. 237.6	av. 154
	143, 144, 147, 148	26-28	28.5-31	214-225 av. 218.5	av. 150
1033 <i>parvula</i> (3)	132, 141, 143	27, 27.5, 27.7	25.5, 26.5, 29	198, 202, 203	av. 145
1034 <i>vernayi</i> (7)	138-147	26.8-28 av. 27.9	26-32 av. 28.2	133-212 av. 182	av. 124
EL <i>selateri</i> (4)	150-158 av. 153	27-30.5 av. 29.2	30.5-31 av. 30.6	230-252 av. 240	av. 157

* With white tips to black tail feathers.

1042-1044 *Nucifraga caryocatactes* subspp.

	Wing	Bill	Tarsus	Tail
♂ ♂				
1042 <i>multipunctata</i> (3)	202, 207, 211	36, 45.3, 47.5	34, 36.5, 38	148, 150, 152
1043 <i>hemispila</i> (6)	209-220 (213)	44.5-46.6 (45.9)	37.5-40.5 (39)	132-150 (137.6)
1044 <i>macella</i> (2)	212, 215	43.8, 45	37, 40	143, 135
♀ ♀				
1042 <i>multipunctata</i> (2)	206, 207	47, 49.7	35.3, 37.6	152
1043 <i>hemispila</i> (4)	207-209	45-48	35.5-39.2	131-149 (138)
o? <i>rothschildi</i>	193	47	34	132

1045 *Pyrrhcorax graculus digitatus*

♂ ♂ (4)	263, 281, 283, 286	33.2-35	36-45	162, 171, 175, 182
(IH)	274-298	from skull	34-38	42-48
♀ ♀ (6)	254-280	31.5-34	35-38	155-171
(IH)	262-273	from skull	32-36	41-46

Etchecopar in LES OISEAUX DU MOYEN ORIENT. p.532, states that this race is larger than the nominate with the wings 280-289 mm. *contra* 255-279.

1046, 1047 *et al.* *Pyrrhcorax pyrrhcorax* subspp.

	Wing	Bill	Tarsus	Tail
♂ ♂				
<i>docilis</i> (2)	289, 298	51.8, 54.5	45.5, 49	145, 147
1047 <i>himalayanus</i> (4)	298-310 av. 307	49.5-65 av. 56.3	46-57	150-160 av. 154
♀ ♀				
<i>docilis</i> (2)	273, 282	50, 50.5	45, 47.5	133, 135
1046 <i>centralis</i> (IH ♂ ♀)	290-336	from skull	50-56	50-58
	mostly over 310			
1047 <i>himalayanus</i> (3)	296, 301 (2)	50.7, 52, 52.3	46, 50, 51	152, 153, 163
(IH ♂ ♀)	291-332	50-103 widely variable	55-65	—)

1053 *Corvus monedula monedula*

♂ ♂ (6)	233-253 av. 24.1	32-37.5 av. 34.5	37.5-45	132-146 av. 138
(IH ♂ ♀)	230-250	32-34	c. 44	c. 135)

1048-1050 *et al.* **Corvus splendens** subsp.

	Wing	Bill	Tarsus	Tail
♂ ♂				
1048 <i>zugmayeri</i> (19)	252-289 av. 272 (IH ♂ ♀ 255-290 ex CBT)	44-52 av. 49	41-49 av. 44	150-175 av. 164
1049 <i>splendens</i> (14)	246-278 av. 266 (IH 266-284)	47.5-52.5 av. 5.2 from skull 51-56	38.5-46 av. 42.8 45-51	145-173 av. 160 162-175)
1050 <i>protegatus</i>	250 (IH 255-284)	45.5 from skull 49-55	44 45-48	145 147-169)
EL <i>insolens</i> (3)	245-255	49.1-51	42-42.5	140, 141, 150
♀ ♀				
1048 <i>zugmayeri</i> (11)	240-278 av. 261 (IH ♂ ♀ 255-290 ex CBT)	44-51 av. 46.5	39.5-45 av. 42	150-175 av. 158.8
1049 <i>splendens</i> (10)	256-279 av. 265 (IH 252-282)	45-52 av. 48.2 from skull 45-50	39-46 av. 42.4 44-48	154-164 av. 157.3 154-175)
1050 <i>protegatus</i> (2)	241, 252 (IH 219-264)	42.1, 46.5 from skull 42-50	38.6, 45.5 45-48	138, 150 128-155)
EL <i>insolens</i> (3)	239, 244, 248	48.2-50	41-43	134, 142, 144

In *zugmayeri*, young birds are darker than adults, and in the material available the males measure larger than the females.

1054-1057 *et al.* **Corvus macrorhynchos** subsp.

	Wing	Bill	Tail	Tail/Wing ratio (average)
♂ ♂				
1054 <i>intermedius</i> (18)	293*, 304-362 av. 331 (IH 311-378)	56.5-63.5 av. 58.5 from skull 54-73 (* albinoid with horn-coloured bill)	166*, 181-225 av. 200.3 144-242)	61.3
1055 <i>levailantii</i> (4)	286-330 av. 309 (IH 308-335)	57.5-61.5 av. 60.5 from skull 61-69	165-193 av. 182 181-197)	58.8
1055a <i>andamanensis</i> (4)	303-326 av. 311.7 (304-345 av. 325)	58.6-65.5 av. 61.8 bills never under 58, usually over 60, upto 70)	172-195 av. 182	58.3
1056 <i>tibetosinensis</i>	343, 347 (1 ♂ 1 ♀)	69, 67	206, 198	60, 57
(IH 325-380)		from skull 69-73	201-260)	
1057 <i>culminatus</i> (11)	276-311 av. 294.6 (IH 273-319)	59-61.6 av. 60.8 from skull 55-67	155-181 av. 166 156-189)	56.3
♀ ♀				
1054 <i>intermedius</i> (6)	296-319 av. 311 (IH 292-343)	51.5-57.8 av. 55.6 from skull 54-65	173-210 av. 194.5 174-224)	62.5
1055 <i>levailantii</i> (2)	297, 321 (IH 280-329)	59, 60.5 from skull 55-65	186, — 165-192)	58
1055a <i>andamanensis</i> (2)	287, 310 (290-321)	60.5, 64.2 bills as in ♂ ♂)	168, 177	58.5, 57
1056 <i>tibetosinensis</i>	(IH 320-341)	from skull 60.67	186-240)	
1057 <i>culminatus</i> (16)	268-315 av. 290 (IH 260-301)	56-62 av. 57.3 from skull 52-63	153-185 av. 168 147-183)	58
EL <i>colonorum</i>	300	59	172	57.3

1058 *et al.* **Corvus corone** subsp.

		Wing	Bill	Tail	
1058	<i>orientalis</i>	♂ ♂ (3) ♀ (1)	359, 352, 305 juv.* 331	57.5, 54, 49.2 50	212, 207, 195* 197
		(ex Vaurie ♂ ♀)	345-366	from skull 59-69	200-218)
1058a	<i>sharpii</i>	♂ ♂ (7) ♀	302-320 av. 312 300	50-53.7 av. 51 48.5	168-190 av. 180 175
		(♂ ♀)	320-340	47-54	c. 200)
EL	<i>capellinus</i>	♂	337	61	199
		♀ ♀ (3)	302, 318, 323	55, 56, 57.3	194, 195, —
EL	<i>cornix</i>	♀	312	43.4	170

1059-61 **Corvus corax** subsp.

		Wing	Bill × height at centre of nostril	Tail
	♂ ♂			
1059	<i>subcorax</i> (5)	398-443 av. 423 (IH 420-448)	62.5-68.5 av. 65.3 × 23.5-25.2 av. 24.1 from skull 66-78	220-240 av. 226.5 229-242)
1060	<i>tibetanus</i> (2)	447-459 (IH 461, 477)	70.5-75 × 24.5-26.8 from skull 78-87	253-270) 266, 288)
1061	<i>ruficollis</i>	382 (IH ex Meinertzhagen ♂ ♀ 370-413)	62 × 20 from skull 62-70	206 —)
	♀ ♀			
1059	<i>subcorax</i> (7)	405-438 av. 419 (IH 399-430)	61-68.5 av. 64.6 × 23-26 av. 24.4 from skull 69, 74	221-227 av. 223 220, 223)
1060	<i>tibetanus</i>	485 (IH 448-465)	73 × 27.9 from skull 73-78	266 257-260)
1061	<i>ruficollis</i>	348-370 av. 362 (IH ♂ ♀ 370-413)	57-65 av. 60.5 × 19.3-22.2 av. 20.9 from skull 62-70	186-200 av. 193 —)

1062 **Bombycilla garrulus garrulus**

	Wing	Bill	Tail
3 ♀ ♀	115, 116 (2) (112-120)	13 (2), 13.5 10-11.5	57, 58.5 (2) 59-67)

1063 **Hypocolius ampelinus**

	Wing	Bill	Tail
11 ♂ ♂ (5 by pl.)	100-105 av. 101.5 (100-110)	14-16.5 av. 15.5 15-16	103-116 av. 109.5 about 115)
6 ♀ ♀ *	97-102 av. 99.6	14.7-16 av. 15.3	97-106 av. 100.5

* Juvenile males may be included.

(to be continued)